APPARATUS AND METHOD FOR PROVIDING TURBO CODE INTERLEAVING IN A COMMUNICATIONS SYSTEM

5   ABSTRACT OF THE DISCLOSURE

A communication system 100 employs turbo encoding having a turbo interleaver 106 that interleaves input data 101 efficiently with little use of system resources. The turbo interleaver 106 reads address locations of the data bits into an interleaver matrix array 206 row by row and interleaves the address locations by bit

10   reversal of the row indexes with accompanying permutation of the corresponding address locations in the rows of the matrix 206, bit reversal of the column indexes with accompanying permutation of the corresponding address locations in the columns of the matrix 206 and shifting the address locations within each row a predetermined number of column locations based on the particular row number.